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Effect of dietary natural extracts mixture on rabbit does reproductive performances: preliminary data

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Abstract

Natural extracts have been widely reported to have antioxidant, anti-inflammatory and antimicrobial activities related to their phenolic content (Pereira *et al.*, 2009). In rabbit, the reproductive phase is critical, therefore, nutritional strategies are required (Castellini *et al.*, 2003; Roche *et al.*, 2000). The aim was to investigate the effect of dietary supplementation with natural extracts in rabbit does on reproductive parameters. The trial was performed at the Research Institute for animal production (Nitra, Slovak Republic). Sixty does, artificially inseminated, were divided into three experimental groups. The first fed a basal diet (C), the second (T₁) and the third one (T₂) received 0.3% and 0.6% of natural extracts mixture for gestation and lactation period. The mixture contains polyphenols from plants and seaweeds. Does were allocated in individual flat-deck cages and at parturition, the number of kits and the litters weights were recorded. The data were analyzed by one way Analysis of Variance using SPSS (IBM. SPSS Statistics 24). Dietary supplementation did not affect ($P>0.05$) number of kids born (8.0 ± 1.0 C vs 7.3 ± 0.97 T₁ and 7.4 ± 1.0 T₂) and birth weight (63 ± 2.0 g C vs 60.1 ± 2.3 g T₁ and 61.0 ± 2.4 g T₂). The administration of natural extracts in does did not improve ($P>0.05$) the kits average daily gain (20.54 ± 1.3 g/d C vs 21.92 ± 0.5 g/d T₁ and 20.93 ± 0.9 g/d T₂) and body weight at weaning (829 ± 16.6 g C vs 834 ± 26.6 g T₁ and 826 ± 26.8 g T₂). These preliminary data showed that at the present dosage, the natural extracts mixture is not able to affect does reproductive performance. However, further research is needed to confirm the present data and explore the mechanism of action of this natural mixture

References

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